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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,959	05/31/2005	Soo-Yeon Shin	0630-2331PUS1	1007
2292	7590	08/08/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			WALBERG, TERESA J	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/536,959	SHIN ET AL.	
	Examiner	Art Unit	
	Teresa J. Walberg	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. In the response received 07 July 2006 the applicants request acknowledgement of a claim for foreign priority under 35 USC 119 and the receipt of a foreign priority document. However, the present application does not appear to claim priority under 119 and no foreign priority document appears to have been received. Applicants are requested to clarify the priority status of this application. If foreign priority was intended to be claimed, the relevant documents appear to be missing from the file and replacement copies will need to be supplied. The present application is currently listed as being a continuing application of PCT/KR02/02265 and no other priority claim is of record in the file.

2. In the response received 07 July 2006, the applicants request that telephone calls be directed to Chad D. Wells, Registration No. 50,875. However this attorney does not appear to be one of the attorneys of record in the case. Power of attorney is currently with customer No. 02292, which does not appear to include the listed attorney. If telephone calls regarding the merits of the case are to be addressed to the listed attorney, a power of attorney will be needed.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 6, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by VanDyke (5,031,693)

VanDyke discloses a heat exchanger including a plurality of heat exchanging plates (7), a first heat exchange member (8) laminated among the heat exchanging plates (7) in the first air path (Fig. 2), and a second heat exchange member (9) laminated among the heat exchanging plates in the second air path (Fig. 2), each of the heat exchange members (8, 9) having a folded corrugated shape (Fig. 2) including a first plurality of upper bends, a first plurality of lower bends, a first plurality of wall portions connecting adjacent upper and lower bends, the wall portions having a plurality of through holes arranged in both a longitudinal direction and a transverse direction (Fig. 2). With respect to claim 11, the wall portions may have three ("two or more") rows of holes (col. 4, line 64 - col. 5, line 9). Note that the limitations regarding the fluid materials with which the apparatus is to be used are considered to be statements of intended use and have not been given patentable weight since the apparatus is capable of use with the stated materials.

5. Claims 1, 6, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Wakeman (2,616,671).

Wakeman discloses a heat exchanger including a plurality of heat exchanging plates (1), first and second heat exchange members (8) laminated among the heat exchanging plates (1) in the first and second fluid paths (Fig. 2), each of the heat exchange members (8, 9) having a folded corrugated shape

(Figs. 2 and 3) including a first plurality of upper bends, a first plurality of lower bends, a first plurality of wall portions connecting adjacent upper and lower bends, the wall portions having a plurality of through holes (24) arranged in both a longitudinal direction and a transverse direction (Fig. 3), the heat exchange members being positioned at an angle of approximately 30 to 60 degrees from the direction of air flow (Figs. 2 and 10).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakeman (2,616,671) in view of Dobbs et al (2002/0185266).

Wakeman, as discussed above, discloses the claimed structure with the exception of the plates being formed of aluminum or paper materials, and the heat exchange members being formed of an aluminum mesh material or a porous resin film. However, Dobbs et al discloses a heat exchanger in which the plates are formed of aluminum or paper materials (para. 0006, lines 13 and 19), and the heat exchange members are formed of an aluminum (para. 0006, lines 13) mesh (Fig. 8A) material or a porous resin film (para. 0040, lines 4-5). It would have been obvious in view of Dobbs to use such materials in the heat

exchanger of Wakeman, the motivation being to obtain the desired weight and level of moisture transfer in the device.


8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Teresa J. Walberg
Primary Examiner
Art Unit 3753

tjw